# ECON5210 Ph.D. Microeconomic Theory I

2020/2021 Fall Semester, Department of Economics, Hong Kong University of Science and Technology

#### Instructor Information

#### Instructor

Kohei Kawaguchi (Lecturer) Weixuan Zhou (TA)

#### **Email**

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#### Office Location & Hours

LSK6070, Tue 17:00-18:00 LSK5017

#### Communication rule

- I set up a slack workspace for communicating with students. This should be the primary way of contacting me. The link to the workspace is shared in the first lecture.
- Contact me whenever you had anything not clear about the lecture.
- The instructor will be in the zoom during the above office hours for answering questions related to the class. The link to the zoom is given in Canvas.
- You can also make an appointment outside the above office hours. But then the instructor's availability is not guaranteed.

#### General Information

#### **Description**

This course provides first-year Economics Ph.D. students with foundation knowledge in advanced microeconomic theory. The course focuses on essential concepts and necessary analytical tools for the study of consumer and firm decision making, both in single-player and multi-player (strategic) environments. We will also consider how uncertainty and concern for future payoffs impact economic agents' decision making.

#### **Expectations and Goals**

On completion of this course, you will be able to:

- 1. understand classic results in microeconomic theory,
- 2. formalize economic problems using simple but well-reasoned models,
- 3. find solutions for formal economic problems, and
- 4. apply equilibrium concepts of game theory to various economic settings.

#### **Class Time**

Mon 14:00-17:50, online.

#### **Course Materials**

Lecture notes, HW assignment, and practice questions will be posted on the course website in canvas.

### **Required Materials**

Microeconomic Theory, Mas-Collel, A., M.D. Whinston, and J.R. Green, Oxford, 1995

#### **Optional Materials**

Microeconomic Theory, S. Wang, People's University Publisher 2006

Microeconomic Analysis, Hal R. Varian, W. W. Norton & Company 1992

Game Theory, Drew Fudenberg and Jean Tirole, MIT Press 1991

#### **Evaluation**

- 1. Midterm 30%: Individual Decision Making (Chapter 1-3, 5-6).
- 2. Final Exam 50%: All Topics.
- 3. Assignments 20%.
- 4. You will need a very strong reason, substantiated by supporting documents, to miss any exam. Considering the advantage of having more time to prepare, the make-up exam is expected to be more difficult than the original exam.
- 5. I request students to turn on your camera during the class to keep the classroom active. It is okay that you occasionally turn off the camera, for example, for going to bathroom.

# **Academic Integrity**

Without academic integrity, there is no serious learning. Thus you are expected to hold the highest standard of academic integrity in the course. You are encouraged to study and do homework in groups. However, no cheating, plagiarism will be tolerated. Anyone caught cheating, plagiarism will fail the course. Please make sure adhere to the HKUST Academic Honor Code at all time (see http://www.ust.hk/vpaao/integrity/).

#### **Course Schedule**

## I. Individual Decision Making (Chapters 1-3, 5-6)

Preference and Choice (Chapter 1)

Consumer Choice (Chapter 2)

Classical Demand Theory (Chapter 3)

Choice under Uncertainty (Chapter 6)

Production (Chapter 5)

## II. Game Theory (Chapters 7-9)

Basic Elements of Noncooperative Games (Chapter 7)

Simultaneous-Move Games (Chapter 8)

Dynamic Games (Chapter 9)

# III. Market Equilibrium and Market Failure (Chapters 10, 12)

Competitive Markets (Chapter 10)

Market Power (Chapter 12)

Other Topics in Industrial Organization (coverage depends on time available)

# Exam Schedule

	Date	Venue	Topic
Midterm exam	TBA	ТВА	Part I
Final exam	TBA	ТВА	Part I, II, III